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ABSTRACT

This study examined the college enrollment decisions of Black and Latino students, focusing on factors that influenced their decision to attend college. Data from the National Education Longitudinal Study of 1988-1994 were used, namely a sample of 11,879 seniors who completed high school in 1992, including 1,181 Blacks and 1,505 Latinos. The study found that Black students who enrolled in a four-year college were more likely to: be female (62 percent), have come from upper-middle-class backgrounds (36 percent), have parents with some college education (52 percent), have been placed in a college prep program in high school (62 percent), and fall in the third quartile of standardized tests (33 percent), than their peers. Unlike Blacks, Latinos who enrolled in a four-year college were slightly more likely to be male (53 percent) and to be from low-income backgrounds (30 percent), and were about equally as likely to have parents with educational levels no higher than high school or some college (38 percent and 37 percent) and to fall into the two highest test quartiles (34 percent and 33 percent respectively). High school preparation and the availability of financial aid also had a significant influence on the college enrollment decisions of both groups. An appendix describes the operationalization of the variables.(Contains 59 references.) (MDM)

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ED 420 253

BLACK AND LATINO COLLEGE ENROLLMENT:

Effects of Background, High School Preparation, Family and Peer Influence and Financial Aid

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Paper Prepared for the 1998 Annual Meeting of the
American Educational Research Association

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Introduction

Higher education often serves as a primary means of upward social and economic mobility for America's youth. As such, college enrollment rates generally reflect both the accessibility of higher education to high school graduates and their perceptions of the relative value of attending college compared to other possible pursuits. While the American system of higher education has grown over the past three decades, Black and Latino high school graduates are still less likely to make an immediate transition from high school to college than their White and Asian peers. This raises important issues about access and equity, as ethnic minorities have and continue to experience lower social status and economic prosperity compared to the White majority (National Center for Education Statistics [NCES], 1996a).

After experiencing significant declines in the late 1970s and early 1980s, the percentage Black and Latino high school graduates attending college has been steadily increasing during the 1990s (Blackwell, 1990; Carnoy, 1994; Kane, 1994; NCES 1996b). This decrease in Black and Latino students' college participation was particularly disturbing because it occurred during a period of massive growth in higher education and at a time when the high school completion rates among students of color were increasing. Hypotheses for the decline in the literature range from racism and lack of motivation among Black and Latino students, to increases in college costs and changes in financial aid policies (Blackwell, 1990; Carnoy, 1994).

Despite the recent growth in Black and Latino students' college attendance, data suggest that stratification by type of institution has increased. Blacks and Latinos continue to be found disproportionately in the sector of higher education that yields the smallest socioeconomic returns (Karen, 1991). Graduates from these racial/ethnic groups are more likely to attend two-year colleges and less likely to enroll in four-year institutions of higher education, compared to their White peers (NCES, 1996a; Wilson-Sadberry, Winfield & Royster, 1991). The type of institution that a high school graduate first attends can affect his or her chances of completing a bachelor's degree. Research has documented that many students who begin their college education at two-year schools are often unsuccessful in their efforts to complete an associate degree, let alone transfer to a four-year college or university. However, in recent decades the purposes of community colleges have evolved beyond preparing students to transfer to four-year institutions, to providing terminal degrees in a variety of academic and nonacademic fields. Nevertheless, some scholars have suggested that the community college is the lowest level of a class-based tracking system in higher education and generally tends to reinforce the status quo (Karabel, 1972).

The present paper examines the college-going behavior of high school graduates, particularly the college enrollment decisions of Black and Latino students. This study focuses on Black and Latino students' immediate transition to higher education with the intention of identifying the factors that influence their college participation. To accomplish this task, two research questions guide this investigation: (1) what are the characteristics of Black and Latino students who make an immediate transition to higher education and (2) what factors influence their decision making process? Of particular importance is examining the differences among students who enroll in four-year colleges and universities, those who attend two-year schools, and those who do not enroll at all, along with the significant determinants of their college attendance.

Theory and Research Perspectives

Student College Choice

Research on Black and Latino students' college attendance has often investigated their college-going behavior from a sociological viewpoint. Some frameworks include the use of cultural deficit models, which interpret minority students' underrepresentation in higher education as a function of cognitive and motivation deficiencies and poor socialization experiences (Allen-Meares, 1990). In general, this approach establishes White middle-class outcomes as the standard and sometimes rationalizes why minority and low socioeconomic students cannot rise above their circumstances and behave like White middle-class males (Cole, 1983; Pollard, 1993). Cultural deficit models fail to account for external and environmental influences that restrict educational resources for minority or low-income students (Cardoza, 1991).

The college-going behavior of high school graduates appears to be better explained by complex and inadequately understood relationships among their socioeconomic background, high school experiences, and family background (Hearn, 1984). The theoretical framework for this paper comes from a model of student college choice developed by Hossler and Gallagher (1987) that emphasizes how the process of college choice occurs and how the college selection process varies for different groups. Student college choice is an ongoing, longitudinal process that begins at an early age, for most students, and results in a student's decision to attend an institution of higher education. Combined models of student college choice emphasize social and economic factors that affect a student's college choice process from a policy analysis perspective (Hossler, Braxton & Coopersmith, 1989).

This model of student college choice has three stages: predisposition, search, and choice. The first stage, predisposition, is a developmental phase in which students decide whether they want to continue their education past high school. At the second stage, search, students explore potential college options and acquire and examine college information. It is during the last stage that students formulate an application set and decide which institution they will attend, or given their alternatives, whether they will attend college at all (Hossler et al., 1989; Hossler & Gallagher, 1987; Paulsen, 1990). The focus of this study most closely parallels the choice stage, particularly whether high school graduates attend college and if so, whether they enroll in a four-year college or university or a two-year school. Research on this stage tends to be dominated by studies conducted by individual institutions. Nevertheless, factors found to influence students during the choice stage include academic ability, parental education and encouragement, socioeconomic status (SES), ethnicity, high school quality, financial aid availability, and receiving financial aid (Hossler, et al., 1989).

The Influence of Family and Background Factors

Research suggests that the reasons for the differential patterns of college attendance among Black and Latino high school graduates stem from family and background characteristics such as SES, and relate to the context in which students of different ethnic origins make their decisions about college (Pollard, 1993; Wojtkiewiez & Donato, 1995). The advantage among White students appears to be their social class origins (Wolfle, 1984). For example, researchers have found that when controlling for

factors such as income and academic performance, Black and Latino students have an equal or higher probability of attending college than Whites (Ganderton & Santos, 1995; Kane & Spizman, 1994; Rivkin, 1995).

SES becomes particularly important when considering rising college costs and the options available to finance a college education. For many students of color, the connection between wanting to go to college and actual enrollment may differ because of their family's financial resources (Wilson-Sadberry et al., 1991). This is why financial aid becomes so important; many Black and Latino families have fewer assets and access to the finances needed for higher education (Blackwell, 1990; Kane, 1994). Observers suggest that one of the more crucial elements in the decline of Black and Latino college enrollment rates in the 1980s was the slowdown in funding for financial aid and a shift from grants to loans at a time of increasing poverty among minority families (Carnoy, 1994). In addition, these students are often unaware of or misinformed about various financial aid programs and policies at the local, state, and federal levels.

It could be that SES is a framework that influences a series of other attitudes and behaviors which, in turn, are related to college choice (Chapman, 1981). Other explanations for the lower college participation rates of minority students include factors that can relate to their SES background and influence their educational decisions. Changes in family structure, particularly in the growing number of single-parent families, are a great concern in both the Black and Latino communities. These changes raise issues regarding lower levels of education and higher levels of unemployment and poverty that ultimately lead to greater social and economic disadvantages (Jones-Wilson, 1990; Wilson & Cocoran, 1988). Empirically, parent education has been one of the more reliable predictors of educational attainment, as research shows that, even among people of color, students with college-educated parents are more likely to attend college than those with lower levels of parent education (Kane, 1994).

Peers also appear to have considerable influence (Wilson-Sadberry et al., 1991). For example, in some communities, through the perception and interpretation of formal education as learning White American culture or as "acting White," students are sometimes viewed by peers as traitors or having loss of their cultural identity (Ogbu, 1988). However, what is probably more prevalent is that minority students often see no connection between schooling and their later life in that they have learned that the social and economic rewards are not proportionate to their educational efforts (Ogbu, 1988). It could be that racial and social stratification policies excluding minorities from full participation in social and economic establishments, which affect the experiences of those living in places with little economic opportunity, have led to variations in the perceived importance of a college degree among White, Black, and Latino students (Pollard, 1993; Steele, 1992).

This may also account for some of the differences in college enrollment among students within these groups, particularly those based on gender. Empirical studies confirm that Black females are more likely to go to college than Black males (Ganderton & Santos, 1995; Hatch & Mommsen, 1984). In fact, the declining number of Black males in higher education has led to what some describe as an alarming situation requiring immediate attention (Gregg, 1989; Wilson-Sadberry et al., 1991). Reasons for the different patterns of college attendance between Black males and females include differences in achievement levels, grades, and educational aspirations; family structure;

employment opportunities for men and women; and different experiences and expectations in school (Gregg, 1989; Pollard, 1993; Walker & Sutherland, 1993).

For Latinos, the gender difference favors males, as data indicate that Latino men are more likely to attend college than Latino women (Ganderton & Santos, 1995; NCES 1996a). The literature suggests that college entry is not as realistic an option for young Latino women as it is for Black women due to sex role socialization and the emphasis on family in the Latino culture, which have strong influences on Latino women's college attendance (Cardoza, 1991; Duran, 1983). Other explanations for the lower college attendance rates of Latino students include language barriers, lower grades and achievement test scores, high school preparation, and for women in particular, gender issues (Duran, 1983; Valencia & Aburto, 1991).

High School Preparation and School-Related Factors

When attempting to explain the postsecondary attainment among minority youth, one has to consider the impact of educational conditions at the secondary level. The college participation of high school graduates may partly relate to the characteristics of the high schools they attend as well as their experiences while enrolled in school. Most Black and Latino students attend public high schools, which are often characterized by insufficient funding and overcrowded classes, the shortage and use of outdated textbooks and other materials, and disturbingly high dropout rates (Kozol, 1991; Lewis, 1994). These and other serious conditions place them at a clear disadvantage in the classroom, especially compared to their peers in Catholic and other private schools, as these schools generally boast academic learning environments oriented toward achievement (Cohen & Neufeld, 1981). Students in Catholic and other private schools take an average of three to four more semesters of academic coursework than students in public schools and are generally regarded as better prepared for college (Coleman, Hoffer, & Kilgore, 1982; Lee & Bryk, 1988). Overall, research has suggested that private schools encourage greater interest in higher education and influence more of their students to attend college than do public schools with comparable students. Not surprisingly, college attendance is less fully implemented among public school graduates than among their counterparts in private schools (Coleman et al., 1982).

The primary explanation for the differences in college participation among the school sectors is students' ability or academic achievement, notably the inadequate performance of public school students. Raising achievement levels among Black and Latino students has been a major educational objective for the past two decades, as they continue to be severely underrepresented among high school graduates who are academically well prepared for higher education (Miller, 1995). Empirical research indicates that students' academic achievement has a strong, positive, and consistent relationship to the probability of attending college (Kane & Spizman, 1994; Manski & Wise, 1983; Stage & Rushin, 1993). Students' grades and their performance on standardized tests, such as the Scholastic Aptitude Test (SAT), are typically significant predictors of their college attendance after high school (Ganderton & Santos, 1995; Stage & Rushin, 1993).

Almost all measures of academic outcomes, such as standardized scores, high school graduation, and participation in college preparatory classes, continue to be strongly correlated with ethnic background and social class (Wilson & Corcoran, 1988).

On standardized tests, such as the National Assessment of Educational Progress (NAEP) and SAT, Blacks and Latinos have historically been overrepresented among low-achievers and underrepresented among high-achieving students. Moreover, these differences among racial/ethnic groups develop relatively early in students' school careers (Miller, 1995). Some educators assert that caution be used in measuring students' academic preparedness for higher education based solely on standardized test scores. These tests only assess a portion of the knowledge and skills taught in school and have been criticized for cultural bias (Lomotey, 1990; Miller, 1995). Students' academic performance could be viewed as a general reflection of the quality of the curriculum to which pupils are exposed, their achievement orientation and motivation, their parents' income, and the number of college preparatory courses taken in high school (Blackwell, 1990).

We cannot ignore that high school students experience different educational pathways reflecting variability in academic expectations and outcomes based on perceived ability differences (Weinstein, 1996). In many schools and school systems throughout the nation there is a persistent reality: White and minority students exist in largely separate worlds that are not equal (Steele, 1992). Tracking is a prime example; it is a mechanism that schools use to divide students into groups and assign them to various kinds of classes according to their track placement (Oakes, 1985, 1986a). Tracking is the principal means of academic stratification in secondary education because it creates a social class within schools in that it reinforces the differences students bring with them to school and often corresponds with status differences in the larger society (England, Meier, & Fraga, 1988; Gamoran, Nystrand, Berends, & Le Pore 1995; Jones, Vanfossen, & Ensminger 1995).

Black and Latino students are typically underrepresented in college preparatory programs and overrepresented in low ability (vocational and general) tracks in high school, while the reverse is true for White students (Blackwell, 1990; England et al., 1988; Lomotey, 1990; Oakes, 1985, 1995). While educators maintain that prior achievement is the primary criterion for track placement, research has shown that Black and Latino students with the same achievement levels as Whites and Asians are still less likely to be placed in a college preparatory program (Oakes, 1995). This becomes a major obstacle in that Black and Latino students who aspire to attend college are not assigned to academic programs; instead, they take classes that do not provide the kinds of challenges necessary to prepare them for higher education (Lewis, 1994). The high proportion of White and affluent students in college preparatory tracks provides them with access to certain educational futures, particularly college or university attendance, and the overrepresentation of Black and Latino students in nonacademic tracks denies them, by exclusion, an opportunity to receive educationally and socially important knowledge (Hallinan, 1994; Oakes, 1985).

Placement in a nonacademic program begins a cycle of restricted opportunities, lower expectations, diminished outcomes, and achievement differences between these students and their peers in academic tracks (Oakes, 1986b). Students placed in a college preparatory programs are more likely to attend college than those assigned to general and vocational tracks (Oakes, 1985; Rosenbaum, 1980; Wilson-Sadberry et al., 1991; Wolfle, 1984). Tracking may be the single most powerful determinant of college participation, independent of a student's plans for after high school (Rosenbaum, 1980).

School personnel communicate differential expectations by encouraging students in academic programs more than others (Gamoran, 1992). The message tracking sends to students in college prep programs is that they are intellectually competent and will go on to higher education, and the message to students enrolled in vocational or general academic programs is that they are incapable of handling rigorous coursework (Carnegie Foundation, 1988). Increasing expectations among teachers and students about possible opportunities to enroll in four-year colleges and universities could have a major impact on Black and Latino pupils' performance in the precollege grades (Carnoy, 1994). Students learn best when excellence is expected of them and when they are encouraged to achieve it and, in general, these expectations should not be linked to race, gender, or class (College Board, 1983). The importance of high staff expectations for student performance has been well documented by the effective schools research. In the case of low-income and minority students, the spiral of declining expectations may be reinforced by their awareness that education does not bring the same benefits to members of their group that it does to members of majority or affluent groups (Wilson & Corcoran, 1988).

Counselors can also help build a climate of encouragement and expectation that will motivate students to persist in a strong program of academic preparation for college. At the secondary level, guidance counselors are very important in facilitating students' transition from high school to higher education (Lee & Eckstrom, 1987). Guidance counselors are among the more preferred sources of college information during the college application process, although the literature suggests that there is a weak, but positive, association between students' college plans and assistance from high school counselors and teachers (Hossler et al., 1989; Paulsen 1990). The literature on minority students' use of high school guidance counselors varies, with some observers reporting that students of color rely on counselors more than Whites and consider them important in helping them with their college plans (Mahoney & Merritt, 1993). Others report that minority students receive less information from counselors and parents than Whites. Overall, there appears to be a relationship between parent education and reliance on parents and counselors for college information; students with higher parent education depend more on parents and less on counselors and the reverse appears true for lower levels of parent education (Paulsen, 1990).

The research in this area has addressed numerous factors that may contribute to the college enrollment decisions of Black and Latino graduates. However, very few studies have attempted to examine students' college attendance by considering a variety of background, school, and other important attributes that appear to play a unique role in predicting Black and Latino students' college attendance. Consequently, this study analyzes the influence of students' background, high school preparation and experiences, and other relevant factors on their transition to higher education.

Method

Data Sources and Sample

The data used to examine the college-going behavior of high school graduates come from the National Education Longitudinal Study of 1988-1994 (NELS), which is a nationally representative longitudinal study of secondary school students. NELS was designed to investigate students' educational, vocational, and personal development at

different grade levels, and the familial, social, institutional, personal, and cultural factors that may affect their development. This data set contains extensive and recent information on students' educational aspirations, experiences in school, and postsecondary activities, along with contextual data relating to their educational experiences.

The 1988 base-year survey used a two-stage, stratified probability design to select a nationally representative sample of over 25,000 eighth-grade students from 815 public and 237 private schools. In addition, data were collected directly from the students' parents, teachers, school principals, and transcripts. Three follow-up surveys were conducted at two-year intervals to provide additional data on participants during grades 10 and 12 (21,474 and 21,188 students, respectively), and two years after high school (approximately 16,000 participants). For more information on the design and implementation of NELS please see Haggerty and colleagues (1996) or Ingels and colleagues (1994).

This paper analyzes data extracted from the 1996 Public Use Version of NELS, primarily data from the student sample collected in 1992 and 1994 and the parent survey also collected in 1992. NELS is a rich data set and contains extensive information on a variety of student groups, including dropouts. Consequently, only students who participated in all three follow-up surveys and those who completed high school in 1992 are included in this study. These selection criteria eliminate issues involving participants who may have dropped or stopped out of school and ensure that students actually finished high school as expected. The sample for this study consists of 11,879 seniors who completed high school in 1992, including 1,181 Blacks and 1,505 Latinos.

Variables and Measures

Since students' immediate transition to higher education is the primary focus of this paper, the definition of college enrollment reflects students' attendance at an institution of higher education during the fall immediately following graduation (October 1992). The three distinct outcomes are enrollment in a four-year college or university, enrollment in a two-year school, and not enrolled. The first category represents students' attendance, regardless of their enrollment status (i.e., full-time or part-time), in a variety of four-year institutions ranging from elite private and large research universities to small nonselective colleges. While this category contains schools with very selective admission policies and high academic standards as well as those with open admission, grouping these institutions is an attempt to denote students' aspirations of attaining at least a bachelor's degree. The second category reflects students' attendance at a two-year school, which includes a broad range of community colleges, technical and vocational schools, and proprietary schools. There is also variation in this sector, as some schools provide academic training leading to an associate degree, while others provide terminal degrees or only certification in a variety of nonacademic fields. The final category represents participants who did not attend any form of postsecondary education in the fall right after high school.

There are three categories of independent variables in this investigation. Details on the construction of all the variables used in this study are provided in Appendix A. The first group focuses on student background characteristics, including race/ethnicity, gender, and SES. The indicators of racial/ethnic origin are Asian, Latino, Black, and

White. SES is a composite measure in NELS that combines both parents' educational levels (if available), occupation, and family income into one composite scale. As part of the NELS design, composite SES scores were then recoded and grouped into SES quartiles in the data file. This category of independent variables also includes parents' marital status and education in order to assess their relationship to students' college-going behavior. Parent marital status indicates whether students came from one-parent households (single, divorced, or never-married parent) or two-parent homes (married parents or those living together). While parent education is part of the composite measure of SES, this variable is included only in the descriptive analyses and measures the highest level of education attained by students' parents.

The second category of variables focuses on students' academic preparation and experiences while in high school. School type (classification) is included to examine the differences in college enrollment among public, Catholic, and private school students. High school program measures students' curriculum (track placement), as reported by students during their senior year of high school. The categories for this variable are general, vocational, other (special education, alternative program), and college preparatory. Two measures of students' academic performance are included: cumulative grade point average (GPA) and composite test scores in reading and math. These variables provide a "snapshot" of students' academic preparedness and performance while in high school. Test scores are based on students' performance on the reading and math tests administered as part of the NELS study during the second follow-up survey in 1992 (1990 test scores are used in place of missing 1992 test data). The last variable in this group is guidance counseling, which measures whether students received assistance with particular aspects of the college application process from a counselor or teacher at their high school. This variable is a composite measures based on students' reports about having received help filling out college applications and financial aid forms, help with college application essays, or days off from school to visit colleges. (In constructing this and subsequent composite variables, reliability analyses are performed to see how closely the included items relate to each other. Appendix A contains the results for the internal consistency (Cronbach's alpha) for this and the other composite variables in this study.)

The last group of independent variables focuses on other factors that appear to influence students' college-going behavior, including parent and peer influence and financial aid. All of the variables in this group are composite (scale) variables that are constructed based on more than one item (please see Appendix A for the internal consistency of these variables). The first variable is a composite measure of parent-student communication about school and school-related activities. It is based on how often students reported talking to their parents about selecting courses or programs, their grades, what they studied in class, school activities or events, their plans and preparation for college admissions tests, and applying to college. The second variable is a composite measure of parents' involvement in their children's application process based on whether and how often parents reported talking with their children about applying to college, schools in general, and particular institutions. The third variable attempts to measure peer influence as it relates to education. It is based on students' reports of how important it was to their close friends to study, get good grades, and continue their education past high school; and how many of their friends planned to go to a four-year or two-year college. The last variable is a measure of financial aid and is based on students' reports

of whether they received, grants (scholarships or fellowships), loans, college work study, or other forms of aid.

Analyses

Descriptive analyses focus on high school graduates' decisions to attend college and highlight differences in their enrollment status based on selected background and school characteristics. Special attention is given to Black and Latino enrollment at four- and two-year institutions of higher education, as well as those who did not go to college right after high school. Logistic regression analysis is the multivariate technique used to analyze the influence of the independent variables on students' transition to higher education. All analyses are weighted by a longitudinal panel weight designed specifically for NELS participants. The panel weight used is "FIF3PNWT," which applies to sample members who completed questionnaires in 1990, 1992 and 1994, regardless of their base-year status. Use of this weight allows projections to the population consisting of students who were in the eighth grade in spring of 1988 or in the tenth grade in spring of 1990. (This panel weight is readjusted to equate the weighted sample size with the unweighted sample size.)

A series of logistic regression analyses examine the relative relationship between college enrollment and students' background, high school preparation and experiences, and other relevant factors on their college participation. Logistic regression analysis estimates the coefficients of the independent variables in a probabilistic model that best predict the outcome of a dichotomous dependent variable. In this study, the two dichotomous dependent variables are students' college enrollment (measured as no or yes) and the level of higher education they attended (two-year or four-year school). Logistic regression analysis requires fewer assumptions than multiple linear regression analysis; violations of assumptions of normality and equality of variances of the independent variables still provide a robust analysis. The logistic regression models employed in this investigation require indicator-variable coding, which recodes variables and creates a comparison (reference) group for each categorical variable. Using indicator-variable coding means that the coefficients for the new variables denote the effect of each category compared to the referent group.

Each logistic model regresses students' college enrollment on five blocks of variables using the enter method in SPSS, thus forcing all variables in a block into the regression model at one time. This five-stage model is used to analyze all students in the study, as well as participants from each ethnic group separately. The first stage of the model attempts to statistically control for background characteristics. In the analysis that includes all students, the first stage of this model regresses students' college enrollment on race/ethnicity, gender, and parent marital status. Parent education is excluded because it is included in the composite measure of SES, which is added to the model during the next stage. Introducing SES as a single measure at the second stage indicates the strength of the effect of SES on each of the logits, net of other background attributes. The third stage adds students' high school preparation and experiences to the model, followed by measures of parent and peer influence, which are added at the fourth stage. The final stage of the model introduces financial aid, to assess the strength of the effect of this measure, net of all the other variables in the model.

Results

High School Graduates' College Enrollment

Over 60% of the high school graduates in this study made an immediate transition to higher education; 38% attended a four-year college or university and 23% attended a two-year school right after high school (39% did not enroll). Table 1 contains the weighted distributions of students' college enrollment status by selected background and school characteristics.

Table 1. College Enrollment Status in October 1992 by Selected Student Background and School Characteristics

	4-Year Institution	2-Year School	Not Enrolled	Chi-Square (χ^2)
Total (N = 11,790)	37.8%	23.3%	38.9%	
Background Characteristics				
Race/Ethnicity (N = 11,790)				210.31; $df = 6$; $p < .001$
Asian	45.9	30.5	23.6	
Latino	24.0	27.6	48.3	
Black	31.9	20.4	47.7	
White	40.2	22.7	37.1	
Gender (N = 11,790)				89.36; $df = 2$; $p < .001$
Male	34.9	21.9	43.1	
Female	40.7	24.6	34.7	
SES (N = 11,656)				1844.49; $df = 6$; $p < .001$
Lowest Quartile	15.9	22.0	62.2	
2nd Quartile	24.1	26.3	49.5	
3rd Quartile	39.0	25.5	35.5	
Highest Quartile	62.9	19.8	17.2	
Parent Marital Status (N = 10,207)				51.13; $df = 2$; $p < .001$
Single/Divorced/Widowed	34.2	21.7	44.1	
Married/Living Together	40.8	23.5	35.8	
‡ *Parent Education (N = 10,702)*				1548.52; $df = 8$; $p < .001$
High School or Less	19.7	23.3	57.0	
Some College	33.4	25.9	40.7	
College Graduate	55.3	21.4	23.3	
Graduate Degree	70.4	16.6	13.0	
High School Preparation				
School Type (N = 11,546)				316.07; $df = 4$; $p < .001$
Public	36.0	23.5	40.4	
Catholic	62.2	21.6	16.2	
Private	59.8	21.3	18.9	
High School Program (N = 11,694)				2312.02; $df = 6$; $p < .001$
General	24.4	24.9	50.7	
Vocational	10.3	24.0	65.7	
Other (e.g., special education)	17.6	25.0	57.4	
College Preparatory	60.4	21.2	18.3	
Test Quartile (N = 9,168)				2245.89; $df = 6$; $p < .001$
Lowest Quartile	10.1	25.2	64.7	
2nd Quartile	21.6	30.5	47.8	
3rd Quartile	43.6	24.7	31.8	
Highest Quartile	71.9	14.3	13.8	

Note: Row percentages are displayed to indicate the distribution of college enrollment for each of the attributes listed. Therefore, row percentages sum to 100%.

‡ A fifth category ("not sure") is excluded from these results due to the small number of cases falling in this category (.1%).

The results reveal a significant relationship between college enrollment and race/ethnicity, gender, SES, and parent education. Asian and White graduates enrolled in four-year colleges and universities at significantly higher rates (46% and 40%, respectively) than Blacks and Latinos (31% and 24%, respectively). In addition, almost half of Black and Latino graduates did not attend college right after high school, while 24% of Asian and 37% White graduates did not go to college. At the two-year level, Asian and Latino graduates attended community colleges at higher rates (31% and 28%, respectively) than Blacks and Whites (20% and 23%, respectively).

The results reveal obvious differences in college enrollment across SES groups. Students from affluent backgrounds were significantly more likely to attend a four-year college or university right after high school (63%), followed by upper-middle class students (39%), lower-middle class (24%) and lastly, those from low-SES backgrounds (16%). Not surprisingly, the reverse was true in that 62% of low-SES students did not attend college right after high school, whereas 17% of those from the highest quartile did not enroll in college. Middle class students were more likely to attend two-year schools, while both affluent and poor students were less likely to enroll at this level. Similarly, the percentage of graduates who enrolled in a four-year college or university increased with the level of parent education. Students with college-educated parents were much more likely to attend a four-year institution (55% and 70%, respectively), while graduates whose parents only went as far as high school or some college (including the completion of an associate degree) were more likely not to enroll in college at all (57% and 41%, respectively). Students whose parents acquired graduate degrees were also less likely to attend a two-year school than students with parents at lower educational levels.

Table 1 also presents high school graduates' enrollment status based on selected measures of high school preparation. The results show that there is a significant relationship between college enrollment and high school type and program, and students' test performance. Approximately 62% of Catholic and 60% of private school students attended a four-year college or university, while only 36% of public school graduates enrolled in a four-year institution. Graduates of public high schools were more than twice as likely (40%) not to attend college right after high school than students who attended Catholic and private high schools (16% and 19%, respectively).

The results for high school program support the literature on tracking in that while 60% of the students placed in college preparatory programs attended a four-year college or university, only 24% of the students in general, 10% in vocational, and 18% in other high school programs enrolled in a four-year institution. Students placed in vocational, other, or general high school programs were, at a minimum, about three times more likely not to attend college right after high school compared to their peers assigned to academic tracks. There is also a significant relationship between college enrollment and students' performance on standardized tests. Roughly 72% of the students in the highest test quartile attended a four-year institution compared to 44% of students in the third quartile, 22% in the second quartile, and 10% in the lowest quartile. Students in the lowest two test quartiles were more likely not to attend college at all (65% and 48%, respectively) compared to those in the third and fourth quartiles (32% and 14%, respectively). Students in the second quartile were more likely to attend two-year schools (31%), while those in the highest quartile were least likely to attend (14%). Those in the first and third quartiles were about equally likely to enroll in a two-year school (25%).

Black and Latino Graduates' College Enrollment

Having described the entire sample included in this study, the focus shifts to Black and Latino students in order to describe the characteristics of these graduates who continue their education beyond high school. Descriptive analyses disclose Black and Latino students' college-going behavior based on selected background and school preparation characteristics. In addition, students' educational expectations as high school seniors are included. Table 2 contains the college enrollment status of Black and Latino graduates in this study, and is intended to describe the general differences between those who attended four-year colleges and universities or two-year schools right after high school, as well as those who did not make an immediate transition to higher education. Since most of the Black and Latino students in this study attended public high schools and there were no significant differences in college enrollment based on parent marital status, these findings are excluded from Table 2.

Table 2. Black and Latino Graduates' College Enrollment Status as of October 1992

	Black Graduates				Latino Graduates			
	N	4-Year School	2-Year School	Not Enrolled	N	4-Year School	2-Year School	Not Enrolled
Total	1,393	31.9%	20.4%	47.7%	1,166	23.7%	27.2%	47.6%
Background Characteristics								
Gender	*1,393*	$\chi^2 = 41.06$; $df = 2$; $p < .001$			*1,166*	$\chi^2 = 3.34$; $df = 2$; $p = .19$		
Male		38.2	42.1	56.7		52.9	45.5	48.5
Female		61.8	57.9	43.3		47.1	54.5	51.5
SES	*1,378*	$\chi^2 = 98.10$; $df = 6$; $p < .001$			*1,121*	$\chi^2 = 103.61$; $df = 6$; $p < .001$		
Lowest Quartile		21.9	37.2	41.1		30.4	44.0	56.0
2nd Quartile		21.0	26.8	29.0		21.3	25.9	27.3
3rd Quartile		35.5	25.2	22.2		24.0	16.5	12.0
Highest Quartile		21.6	10.7	7.3		24.4	13.6	4.7
[1] *Parent Education*	*1,388*	$\chi^2 = 101.83$; $df = 8$; $p < .001$			*933*	$\chi^2 = 53.32$; $df = 8$; $p < .001$		
High School or Less		21.1	39.4	44.9		37.6	46.8	58.1
Some College		52.2	43.9	46.0		37.3	39.8	32.6
College Graduate		16.8	9.7	5.2		4.7	6.6	11.1
Graduate Degree		9.9	6.6	3.3		14.1	6.8	3.7
High School Preparation								
High School Program	*1,383*	$\chi^2 = 269.70$; $df = 6$; $p < .001$			*1,151*	$\chi^2 = 185.05$; $df = 6$; $p < .001$		
General		23.5	49.9	39.9		23.6	46.2	50.7
Vocational		5.6	9.9	26.2		13.5	12.0	9.0
Other (e.g., special ed.)		9.4	13.1	15.3		3.9	10.5	17.9
College Preparatory		61.5	27.0	18.6		63.5	31.4	17.8
Test Quartile	*1,040*	$\chi^2 = 157.75$; $df = 6$; $p < .001$			*889*	$\chi^2 = 161.23$; $df = 6$; $p < .001$		
Lowest Quartile		20.2	40.4	52.9		11.9	30.4	40.6
2nd Quartile		28.1	36.6	27.8		21.5	41.9	37.8
3rd Quartile		32.6	21.7	15.5		33.8	19.1	14.9
Highest Quartile		19.2	1.2	3.8		32.8	8.6	6.6
Educational Expectations	*1,261*	$\chi^2 = 205.87$; $df = 8$; $p < .001$			*1,061*	$\chi^2 = 259.24$; $df = 8$; $p < .001$		
Not Sure		4.1	5.9	6.7		2.2	9.5	10.3
High School or less		0.3	0.6	7.6		0.1	0.5	9.6
Some College		5.8	24.0	36.1		4.8	32.2	37.9
Finish College		40.3	31.5	26.0		33.1	32.4	27.3
Graduate Degree		49.5	37.9	23.6		59.8	25.4	14.9

Note: Column percentages are displayed to compare characteristics for each category of college enrollment. Therefore, the column percentages sum to 100%.

[1] A fifth category ("not sure") is excluded from these results due to the small number of cases in this category (.1%).

The results show that there was a significant relationship between Black students' college participation and their gender, SES, parents' education, high school program, test performance, and educational expectations. Black students who enrolled in a four-year college or university right after high school are more likely to: be female (62%), come from upper-middle class backgrounds (36%), have parents with some college education (52%), have been placed in a college prep program in high school (62%), fall in the third quartile on standardized tests (33%), and have had education expectations of completing at least a master's degree as high school seniors. Black graduates who attended community colleges or other two-year schools after high school differed from their peers who attended four-year institutions. While they were also more likely to be female (58%), these graduates were more likely to: come from low-income backgrounds (37%), have parents with some college education (44%), have been placed in a general high school program (50%), and fall in the lowest test quartile (40%). As high school seniors, more than one-third (38%) of these students expected to complete at least a master's degree.

Black high school graduates who did not enroll in an institution of higher education were similar to their peers who attended two-year colleges. However, over half were male (57%), which is expected especially since more Black females enrolled at both the four- and two-year levels. Black students who did not enroll were more likely to come from low-income backgrounds (41%) and about equally likely to have parents with some college or only a high school education (46% and 45%, respectively). They were also more likely to have been tracked in a general high school program and to fall in the lowest test quartile (53%). As high school seniors, these participants were more likely to expect that they would only go as far as to complete some college (36%).

For Latino graduates, there was a significant relationship between college enrollment and all of the variables in Table 2, except gender. Unlike Black graduates, Latino students who enrolled in a four-year colleges and universities were only slightly more likely to be male (53%). The students were more likely to come from low-SES backgrounds (30%). They were also about equally as likely to have parents with educational levels no higher than high school or some college (38% and 37%, respectively) and to fall in the highest two test quartiles (34% and 33%, respectively). These students were more likely to have been placed in a college prep program in high school (64%) and to have had expectations of completing graduate school as high school seniors (60%).

Latinos who attended two-year schools were more likely to: be female (55%), come from low-SES families (44%), have parents who went no further than high school (47%), have been assigned to a general high school program (46%), fall in the second test quartile (42%), and have had expectations of completing some college or a bachelor's degree (32% and 32%, respectively). The characteristics of Latino graduates who did not make an immediate transition to higher education reveal that they were slightly more likely to be female (52%). They were also more likely to come from low-SES backgrounds (56%), have been assigned to a general high school program (46%) and fall in the lowest test quartile (41%).

Black and Latino Graduates Who Do Not Enroll

As mentioned previously, nearly half of all Black and Latino graduates did not attend college immediately after high school. To gain a better understanding of the factors students saw as important in their decision not to pursue higher education, reasons why Black and Latino seniors did not plan to continue their education beyond high school are examined. The results in Table 3 indicate that the most common reason why Blacks and Latinos did not attend college right after high school was that they planned to take some time off before pursuing a college education (approximately 70%). Other common explanations included: students would rather work and earn money, they could not afford college, and they had to help their families, all of which may directly or indirectly relate to students' financial circumstances. The next set of reasons focuses on students' academic preparation and experiences, including reports that they had not taken the right courses in high school (more so for Blacks than Latinos), their grades were not good enough for college, and they simply did not like school.

Table 3. Reasons Black and Latino Students Did Not Attend College Right After High School

Reason	Blacks (N = 167)	Latinos (N = 121)
Planned to take time off before school	69.6%	70.2%
Could not afford school	46.7	38.3
Would rather work and earn money	42.7	42.9
Had to support family	35.4	31.8
Had not taken the right courses	33.6	15.8
Grades were not good enough	28.5	25.8
Did not like school	27.3	22.5
Did not need more school for job	24.6	19.3
No one in family had gone to college	18.9	19.2
Do not feel school was important	20.9	13.3
Test scores were too low	19.6	10.5
Not accepted to schools applied to	12.1	7.1

Note: These percentages illustrate graduates who reported as seniors in 1992 that they did not plan to go to college right after high school and those who had not enrolled in fall 1992.

Overall, the findings presented above are consistent with those reported in the literature. The results show that Black and Latino high school graduates are less likely to make an immediate transition to higher education than Whites and Asians. In addition, the gender gap in college enrollment, particularly for Black graduates is quite large and supports the findings of previous research investigations. SES appears to be an important factor in students' college-going behavior, particularly their enrollment in four-year institutions. Also consistent with the literature is the importance of high school preparation, particularly the relationship between tracking and test performance and students' subsequent transition to higher education. For example, Black and Latino students' placement in a college preparatory program and higher test scores indicate a greater likelihood of college attendance at a four-year college or university.

Multivariate Analyses

The descriptive analyses presented thus far are informative in that they reveal that high school graduates' transition to college is related to specific student background attributes and school experiences such as ethnicity, SES, and tracking. Nevertheless, these analyses provide little information about the strength of these relationships, nor do they indicate the relative importance of these particular measures in students' subsequent college enrollment. The logistic regression analyses employed in this study examine the significance of students' background, high school preparation, and other factors in predicting students' transition to higher education. The results of these analyses focus on the estimated effects of the independent measures on the likelihood of college attendance compared to not going at all, and students' enrollment in a four-year college or university relative to a two-year school.

The results for the analysis containing all students and those containing only Blacks and Latinos facilitate the discussion about students' transition to higher education. While the analyses for Asians and Whites are provided, comparisons and conclusions about racial/ethnic differences in college enrollment are avoided in this review of the findings for two reasons. First, Blacks and Latinos differ from each other as well as from the White majority and have many different experiences with respect to their family background and high school preparation. Consequently, it seems inappropriate to compare these groups, which would be somewhat analogous to comparing apples and oranges. Moreover, such comparisons extend beyond the original intention of this study– to examine Black and Latino graduates' college enrollment. Second, to make such comparisons appears to follow the patterns typically employed with cultural deficit models by establishing White or middle-class behavior as the norm and attempting to conform Blacks and Latinos to such standards.

Table 4 displays the estimated coefficients of the variables in the final regression model predicting college enrollment. The first column for each group contains the estimated coefficients of the independent variables on the log odds of college enrollment (β). The second column displays *e* raised to the power of β ($Exp(\beta)$), which is the factor by which the odds of college enrollment change with changes in the independent variables. In the logistic regression analyses discussed here, the odds of attending college are defined as the ratio of the probability of college enrollment to the probability of not enrolling. It is important not to confuse this definition of odds with its common informal usage to simply denote probability.

In predicting high school graduates' college enrollment, only ethnicity and SES were among the background characteristics having a significant influence on students' college enrollment. Asian graduates were significantly more likely to attend college, while Black graduates were significantly less likely to attend college compared to Whites (the referent group). Coming from less affluent backgrounds significantly reduced the odds of college enrollment (by a factor of more than .5 ($1- Exp(\beta)$) for graduates in the lowest quartile). Among high school preparation and school experiences, tracking and guidance counseling had unique and significant contributions to graduates' subsequent college participation. Students in vocational and general programs had significantly reduced odds of attending college after high school (by factors of .52 and .47, respectively) compared to students assigned to college preparatory programs. In addition, guidance counseling was a significant part of the college application and choice

process for high school graduates. Lower levels of assistance significantly reduced the odds of college attendance (please see table notes for further clarification about the coefficients for this variable). Similarly, parents' involvement in their children's college application process had a significant influence on students' college enrollment.

Table 4. Summary of Estimated Parameters in Logistic Regression Analysis for College Enrollment

	All Students (N = 5,251)		Asian (N = 426)		Latino (N = 461)		Black (N = 424)		White (N = 3,459)	
	β	Exp(β)	β	Exp(β)	β	Exp(β)	β	Exp(β)	β	Exp(β)
Background Characteristics										
Race/Ethnicity										
Asian	.60*	1.83								
Latino	-.07	.93								
Black	-.33*	.72								
(White)										
Gender										
Male	-.06	.93	.34	1.40	.26	1.29	-.08	.92	-.16	.85
(Female)										
Parent Marital Status										
Single/Divorced/Widowed	.05	1.05	-.12	.88	-.51	.60	.49	1.63	.16	1.17
(Married/Living Together)										
SES										
Lowest Quartile	-.88***	.41	-.80	.45	-.99	.37	-.42	.66	-.82***	.44
2nd Quartile	-.54***	.58	-.55	.58	-.34	.71	.33	1.39	-.50**	.60
3rd Quartile	-.34**	.71	.68	1.97	-.55	.58	.31	1.36	-.44**	.65
(Highest Quartile)										
High School Preparation										
High School Type										
Public	.24	1.27	.09	1.09	.55	1.73	-4.12	.02	.01	1.01
Catholic	.73*	2.07	-.18	.84	.74	2.09	-3.69	.03	.60	1.81
(Private)										
High School Program										
General	-.63***	.53	.44	1.55	-1.01*	.36	-1.00**	.37	-.44**	.64
Vocational	-.73***	.48	.94	2.55	.45	1.57	-1.76***	.17	-.39	.68
Other	-.39	.67	.90	2.46	-1.61*	.20	-.48	.62	-.14	.87
(College Preparatory)										
GPA	.005*	1.00	.03	1.03	-.01	.99	.00	1.00	.007**	1.01
Test Scores	-.002	1.00	.05	1.06	.01	1.01	-.005	1.00	.03***	1.03
‡Guidance Counseling	-.39***	.68	-1.87	.15	-.47	.62	.18	1.20	-.46***	.63
Other										
Parent Comm. w/Students	.08	1.08	.40	1.49	-.03	.97	.22	1.25	.02	1.02
‡Parent Involvement	-1.34***	.27	-1.21**	.30	-1.40***	.25	-.86***	.42	-1.45***	.24
Peer Influence	.14	1.15	.39	1.48	-.07	.93	.25	1.28	.16	1.18
‡Financial Aid	-.33*	.72	-1.23	.29	-1.10	.33	-.06	.94	-.04	.96

Note: * $p < .05$, ** $p < .01$, and *** $p < .001$. Cases with missing data are excluded from these analyses, thus reducing the original sample size of each group. Categories in parentheses are the referent groups for each categorical variable. If $\beta > 0$, the odds are increased; if $\beta < 0$, the odds are decreased.

‡In NELS, the coding of these variables was such that increasing numbers (for the categorical responses) typically represented decreases in the measured outcomes (see Appendix A). As a result, the negative coefficients in these results should be interpreted cautiously (i.e., there exists a positive relationship between these variables and college enrollment). Therefore, lower levels of guidance counseling, parent involvement, or financial aid reduced the odds of college enrollment.

After controlling for family background, high school preparation, and the influence of parents and peers, the results indicate that receiving financial aid was a significant factor in students' college-going behavior. Lower levels of financial aid significantly reduced the odds of graduates' college attendance. Gender, high school type, test scores, parent communication with students, and peer influence were not unique contributions in predicting graduates' college enrollment. In terms of how well this model fit the data, it correctly predicted outcomes for 88% of the participants. Of the

graduates who attended college, 97% were correctly classified, while only 25% of those who did not enroll were correctly identified. However, the goodness-of-fit statistics disclose that this model fit the data well and was statistically significant ($\chi^2 = 5776.63$, $df = 20$, $p < .01$).

For Black and Latino high school graduates, only tracking and parent involvement in the college application process had unique and significant contributions to their college participation. The effects of high school tracking and parent involvement were similar to the results of the regression analysis that included all students. For Black students, placement in vocational and general programs were highly significant in reducing the odds of their college enrollment after high school, while placement in general and other high school programs significantly reduced the odds of college enrollment for Latino students. The influence of parent involvement was highly significant for both groups; lower levels of parent involvement significantly reduced the odds of their college participation. Factors such as gender, SES, GPA, test scores, guidance counseling, and even financial aid, were not significant predictors of Black and Latino students' transition to higher education. Overall, the model correctly classified 84% of Black and 87% of Latino graduates' college enrollment and correctly identified 97% of both Black and Latino graduates who enrolled in college. However, the model was much less accurate in correctly identifying those who did not go to college and only predicted 19% and 38% of Black and Latino students who did not attend college right after high school, respectively. The goodness-of-fit statistics indicate that this particular model did not fit the data very well and was statistically insignificant ($\chi^2 = 410.86$, $df = 17$, $p = .64$ for Blacks and $\chi^2 = 317.74$, $df = 17$, $p = .16$ for Latinos).

A second series of logistic regression analyses examine the college choice decisions of those who made an immediate transition to higher education; that is, those who enrolled in a postsecondary institution after graduation. The same independent variables are included to examine their relative effects on students' enrollment in a four-year versus a two-year school. Table 5 presents the result of these analyses, which used college type as a dependent variable. The first column for each group contains the estimated coefficients of the independent variables on the log odds of students' enrollment in a four-year college or university and the second column displays the factor by which the odds of going to a four-year school changes with changes in the independent variables.

In the model that included all students, SES was the only background attribute that had a highly significant influence on students' decisions to attend a four-year institution of higher education. The results show that students from lower SES groups were significantly less likely to enroll in a four-year college or university after high school compared to students from affluent backgrounds (the referent group). In fact, coming from the lowest two SES quartiles reduced the odds of attending a four-year institution by a factor of .75 (1- Exp(β)). Race/ethnicity, gender, and parent marital status were not unique or significant predictors of students' immediate transition to a four-year college or university.

Table 5. Summary of Estimated Parameters in Logistic Regression Analysis for Type of College Attended

	All Students (N = 4,555)		Asian (N = 385)		Latino (N = 371)		Black (N = 348)		White (N = 3,052)	
	β	Exp(β)	β	Exp(β)	β	Exp(β)	β	Exp(β)	β	Exp(β)
Background Characteristics										
Race/Ethnicity										
Asian	-.08	.92								
Latino	-.18	.83								
Black	.30*	1.35								
(White)										
Gender										
Male	.10	1.11	-.25	.78	.38	1.47	-.05	.95	.14	1.15
(Female)										
Parent Marital Status										
Single/Divorced/Widowed	.08	1.08	.96	2.62	-.60	.55	.39	1.48	.15	1.16
(Married/Living Together)										
SES										
Lowest Quartile	-1.39***	.25	-1.42*	.24	-.82	.44	-1.55**	.21	-1.00***	.37
2nd Quartile	-1.37***	.25	-1.38*	.25	-.36	.70	-1.44**	.23	-1.12***	.32
3rd Quartile	-.80***	.45	-1.37**	.25	-.17	.84	-.90	.41	-.50***	.60
(Highest Quartile)										
High School Preparation										
High School Type										
Public	-.87***	.42	.56	1.76	-.50	.61	-1.81	.16	-1.13***	.32
Catholic	-.46	.63	.46	1.59	-.91	.40	.50	1.65	-.61	.54
(Private)										
High School Program										
General	-.71***	.49	.39	1.48	-1.12**	.33	-1.34***	.26	-.39***	.68
Vocational	-1.52***	.22	-1.84	.16	-2.12**	.12	-.94	.39	-1.08***	.34
Other (e.g., special ed.)	-.96***	.38	-1.17	.31	-1.04	.36	-1.14*	.32	-.47*	.62
(College Preparatory)										
GPA	.005**	1.00	.004	1.00	.01	1.01	.01	1.01	.004*	1.00
Test Scores	.01***	1.01	.14***	1.15	.02	1.02	-.004	1.00	.08***	1.09
‡ Guidance Counseling	-.54***	.58	-.05	.95	-1.69*	.18	-.87	.42	-.73***	.48
Other										
Parent Comm. w/Students	.40***	1.49	.11	1.12	.21	1.23	.22	1.24	.48***	1.62
‡ Parent Involvement	-.44***	.65	.35	1.41	-.94	.39	-.83*	.43	-.44***	.65
Peer Influence	-.09	.92	-1.05*	.35	.17	1.18	.16	1.18	.17*	.84
‡ Financial Aid	-1.95***	.14	-2.26**	.10	-3.96***	.02	-.97	.38	-1.57***	.21

Note: * $p < .05$, ** $p < .01$, and *** $p < .001$. Only students who enrolled in college are included in these analyses. Cases with missing data are excluded from these analyses, thus reducing the original sample size of each group. Categories in parentheses are the referent groups for each categorical variable. If $\beta > 0$, the odds are increased; if $\beta < 0$, the odds are decreased.

‡ In NELS, the coding of these variables was such that increasing numbers (for the categorical responses) typically represented decreases in the measured outcomes (see Appendix A). As a result, the negative coefficients in these results should be interpreted cautiously (i.e., there exists a positive relationship between these variables and college enrollment). Therefore, lower levels of guidance counseling, parent involvement, or financial aid reduced the odds of enrollment in a four-year school.

In this model, unlike the previous one that only examined whether graduates went to college, students' high school preparation and academic experiences were highly significant in predicting their attendance at a four-year college or university. Public school graduates were significantly less likely to enroll in a four-year institution compared to graduates of private high schools (attending a public high school reduced the odds of attendance at a four-year school by a factor of .58). In addition, high school tracking was highly significant in students' decisions to enroll in a four-year institution versus a two-year college. Students assigned to nonacademic tracks were significantly less likely to begin their college education at a four-year institution of higher education compared to those in the college preparatory track. Placement in vocational, general, and other high school programs reduced the odds of attending a four-year college or university by factors of .78, .51, and .62, respectively. Students' academic performance

also appeared important in their decisions to go to a four-year institution rather than a two-year school. Increases in both students' GPA and test scores suggest significantly increased odds of enrolling in a four-year college or university. However, the coefficients of these variables were so close to zero that the factors (Exp(β)) equal one, which really leaves the odds of going to a four-year institution unchanged. Not surprisingly, lower levels of guidance counseling significantly reduced students' odds of attending a four-year institution.

At this level of higher education, parents had a significant influence on students' college participation. The results indicate that greater parent communication with their children about school and school-related activities significantly increased the odds that these graduates would go on to attend a four-year college or university by a factor 1.49. Similarly, lower levels of parent involvement in the college application process significantly reduced the odds that high school students enrolled in a four-year college or university right after high school. The results also show that net of students' background attributes, their high school preparation and experiences, and the influence of their parents and peers, financial aid had a highly significant effect on their decisions to attend a four-year institution of higher education. Lower levels of financial aid received by students reduced the odds of their enrolling in a four-year college or university by a factor of .86. The model correctly identified 89% of those who enrolled in a four-year college or university and 49% of those who attended a two-year school (75% overall). The goodness-of-fit statistics indicate that this model fit the data well and was statistically significant ($\chi^2 = 5.150E+11$, df = 20, $p < .001$).

The results of the analyses for Latinos and Blacks differ from the model that included all participants as well as from each other. For Latino graduates, high school tracking, guidance counseling, and financial aid were significant in predicting their attendance at four-year institutions of higher education. Latino students placed in vocational and general high school programs were significantly less likely to go to a four-year institution of higher education; the odds of their attending a four-year school were reduced by factors of .88 and .67, respectively. Guidance counseling also played an important role in facilitating Latino students' immediate transition to higher education in that lower levels of guidance counseling significantly reduced the odds that they would go on to attend a four-year college or university. Lastly, financial aid was highly significant in Latino graduates' decisions to attend a four-year college or university versus a two-year school; lower levels of financial aid received by Latino students reduced their odds of going to a four-year institution by a factor of .98. Gender, parent marital status, SES, type of high school attended, GPA, test scores, and parent and peer influence were not unique contributors to Latino graduates' enrollment in a four-year institution of higher education. This model correctly identified 78% of Latino graduates who attended a four-year college or university and 73% of those who enrolled in a two-year school (76% overall). The goodness-of-fit statistics disclose that this model fit the data well and was statistically significant ($\chi^2 = 260.47$, df = 17, $p < .001$).

For Black high school graduates, only three of the independent variables included in this regression analysis were significant predictors of their enrollment in a four-year college or university: SES, high school program, and parent involvement. First, coming from a low-SES background was highly significant and reduced the odds that Black graduates would make an immediate transition to a four-year college or university

compared to Black students from affluent backgrounds. Black students from the two lowest SES quartiles had significantly reduced odds of attending a four-year institution by factors of .79 and .77, respectively. Placement in a general high school program was highly significant in reducing the odds that Black graduates would continue their education at a four-year college or university by a factor of .74, compared to those in college preparatory programs. In addition, Black students assigned to other high school programs were significantly less likely to attend a four-year institution of higher education after high school; the odds were reduced by a factor of .68, compared to their peers in academic programs. As in their decisions to go to college, parent involvement in the college application process was significant in Black students' enrollment in a four-year college or university. Lower levels of parental involvement significantly reduced odds of going to a four-year institution. Gender, parent marital status, type of high school attended, GPA, test scores, guidance counseling, peer influence, and financial aid were not significant predictors of Black graduates' enrollment in a four-year institution of higher education. This model correctly predicted 90% of Black graduates who attended a four-year institution and 41% of those who enrolled in a two-year college after high school (75% overall). The goodness-of-fit statistics disclose that this model fit the data well and was statistically significant ($\chi^2 = 60164.16$, $df = 17$, $p < .05$).

Conclusions and Discussion

This study reveals that, absent of other factors, there is a direct relationship between ethnicity, gender, SES, high school program, test scores, and high school students' transition to higher education. These results generally hold true for Black and Latino graduates as well. The findings also disclose differences between Black and Latino graduates who make an immediate transition to higher education and those who do not, and those who enroll in four-year institutions versus two-year schools. It appears that two-year schools may play an important role in facilitating Black and Latino students' college enrollment because students who attend these schools are similar, in some aspects, to those who do not attend college at all. It may be that community colleges and other two-year schools represent an opportunity for Black and Latino graduates to acquire more formal education when they may not have otherwise pursued higher education at all.

The analyses conducted here reveal that when accounting for additional background, school preparation, and other factors, attributes such as ethnicity and gender are no longer significant in students' transition to higher education. In addition, students' SES and test scores are inconsistent predictors of their college participation and their enrollment in a four-year institution. While these and other factors such as GPA and guidance counseling appear significant in the college-going behavior for most students, they do not seem as important in predicting the college enrollment status of Black and Latino graduates.

Tracking and parent involvement in the college application process emerge as consistently significant predictors of Black and Latino graduates' college participation. Placement in a nonacademic program significantly reduces the odds that these graduates will pursue higher education at all, and lowers the likelihood that they will attend a four-year college or university. Moreover, lower levels of parent involvement significantly reduces the odds of college attendance overall, as well as enrollment at the four-year

college level. SES is important in predicting Black graduates' enrollment in a four-year institution in that those from less affluent backgrounds are still significantly less likely to continue their education beyond high school and are less likely to go to a four-year college or university. For Latino graduates, financial aid is highly significant in that lower levels of financial aid significantly reduces the odds of their college participation overall and their attendance at a four-year institution.

The findings from this study also reveal that factors such as gender, parent marital status, high school type, GPA, test scores, and peer influence are not unique and significant contributors in predicting Black and Latino graduates' college enrollment, as suggested by the literature. However, these results confirm that the process of college choice varies for different student groups since the factors that are significant in Black and Latino students' decisions to attend college differ from other groups. They also suggest that there is nothing universal about students' decisions to go to college and that different factors influence students' plans to pursue higher education (Trent, 1970). The findings of this study indicate that the major determinants of college participation proposed by other researchers such as ethnicity and achievement are insignificant predictors of Black and Latino students' college enrollment. For example, SES, family structure, and academic achievement are insignificant in determining their college enrollment. Notwithstanding the small number of significant independent variables in the regression models employed in this study, overall they correctly predicted graduates college participation outcomes at least 75% of the time.

The findings of presented in this paper lead to several limitations that deserve mention. First, missing data dramatically reduced the number of participants included in the regression analyses; this was particularly true of the analyses for Black and Latino graduates. The large number of cases excluded from these analyses due to missing data brings forth concerns about selection bias. A second limitation involves possible deficiencies in the models used in this study, particularly their inability to distinguish between students who enrolled in college and those who did not. It may also be that students' college enrollment were difficult to model with these data, particularly for Black and Latino students who did not attend college, as these were often the misclassified cases.

A third limitation is the operationalization of the dependent variable, college type. The categories for this dependent variable, four-year and two-year, contained a wide variety of institutions and did not distinguish between private and public schools or students' status (full-time versus part-time) in these institutions. A fourth limitation focuses on the design of and analyses conducted for this study. While 1992 and 1994 student data were used, this investigation was not necessarily longitudinal in nature. Examining Black and Latino students' predisposition toward higher education earlier during their high school careers may have revealed interesting and important information about their college choice process. Such inquiries may have also revealed relationships between students' predisposition and college choice and the significant independent variables included in this study, such as tracking and parent involvement. In addition, students' persistence in college once they enroll is an important topic of interest, since Black and Latino students tend to have higher attrition rates.

The findings from this investigation lead to implications involving equity and equal programs within and among schools. Attending a high school that places students

in nonacademic programs and courses reduces the likelihood that students will continue their education beyond the secondary level. By continuing to sort students into separate and unequal programs, high schools affect the opportunities available to students while in school. They also help shape students' views of what opportunities will be available to them after graduation. These findings also reiterate the importance of parent involvement in order to enhance students' educational outcomes.

More empirical research on high school students' transition to and persistence in higher education is needed, including further studies on student college choice. A natural extension of the present study is an examination of graduates' college attendance several years after secondary school, in addition to their enrollment right after graduation. This would accomplish several tasks simultaneously by investigating students' persistence in college and how much time elapses before other graduates first attend college. The findings would be especially interesting since students in this study reported that they wanted to take some time off before going to college. Future research in this area should also focus more on the role of high schools in students' transition to higher education, particularly the differential effects of tracking and how this affects students' academic experiences and performance in school.

The pervasive and continuing relationship between educational achievement and the ethnic and social background of students in America continues to be one of the major problems facing our society (Wilson & Corcoran, 1988). While there are many unknown factors that bear upon college enrollments, educational attainment does not occur in a social vacuum. Education is a social institution that reflects patterns of race relations throughout American society. It mirrors conditions that prevail in other components of the social system (Blackwell, 1990). Many policy analysts think raising minority achievement in high school is the only way to raise college enrollment. However, past experience, and even the results of this study, suggest that raising Black and Latino students' test scores is not enough (Carnoy, 1994).

When addressing the academic preparation, or lack of it, of high school students for college, particularly Blacks and Latinos, we must realize that in many school systems, school boards, administrators, and teachers have a hierarchy of concerns. Unfortunately, the academic preparation of high school students for postsecondary education often has the lowest priority (Lewis, 1994). However, improving the overall preparation (not only test scores) of students for college is necessary to fulfill our national promise of equal access to higher education and can help improve the quality of high school education (College Board, 1983). Lastly, there needs to be a clear climate of commitment to improving minorities' opportunities (Carnoy, 1994).

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Appendix A: Operationalization of Variables

Dependent Variables

College Enrollment. This dichotomous variable measures a high school student's immediate transition to higher education; that is, whether a graduate enrolled in an institution of higher education in October 1992 (the fall following graduation). It is based on ENRL1092 and has two options: no or yes.

College Type. This variable identifies the type of institution attended after high school (in October 1992). It is also constructed from ENRL1092 and indicates enrollment at a two-year school or four-year college or university.

Independent Variables

Student Background

Race/*Ethnicity.* This categorical variable measures racial/ethnic origin based on the F3RACE variable. The four ethnic groups include Asian, Latino, Black, and White.

Gender. This dichotomous variable measures a student's sex and indicates whether the respondent was male or female based on the F3SEX variable.

Socioeconomic Status (SES). This variable measures participants' socioeconomic status constructed from F2SES1Q. In NELS, SES was constructed into one composite scale (F2SES1) based on father's and mother's education level (if both were available), father's and mother's occupation, and family income. Composite SES scores were then recoded and grouped into SES quartiles (1 is the lowest and 4 is the highest) based on the weighted marginal distribution of responding parents (F2SES1Q).

Parent Education. This composite variable measures the level of education attained by the parent with the highest reported education level and was taken from F2PARED. This variable was recoded to include the following categories: (1) high school or less (including an equivalency degree and those who did not finish high school), (2) some college (including the completion of an associate degree), (3) college graduate, (4) graduate degree (master's degree, Ph.D., M.D., or other).

Parent Marital Status. This variable measures parents' marital status and was constructed based on F2P7 in NELS, which asked parents to identify their marital status. This variable was recoded into two categories: (1) single-parent households (including single/never married, divorced or separated, and widowed parents) and (2) two-parent households (including married parents and those living together like a married couple).

High School Preparation

High School Type (Classification). This variable comes from G12CTRL and classifies the students' school type as public, Catholic, or other private, as reported by the school.

High School Program (Track). This composite variable, taken from F2HSPROG, measures students' high school program (track placement) as reported in the 1992 student questionnaire. The variable was recoded to include the following categories: (1) general, (2) vocational, (3) other (special education, alternative, other special program), and (4) college preparatory.

Grade Point Average (GPA). This variable is taken from F2RGPA, which is the cumulative GPA for last year attended. (Note: This item is stored as a continuous variable in the data file and has not been standardized. Some values exceed 100 percent because of quality points awarded for advanced courses.)

Test Scores. This variable comes from F22XCOMP, F2XQURT, F12XCOMP, and F12XQURT. F22XCOMP measures students' performance on the second follow-up standardized test composite (in reading and math) administered through NELS in 1992. F22XQURT is the standardized test quartile, where 1 is lowest and 4 is the highest quartile. For participants missing 1992 test data, 1990 test data (F12XCOMP and F12XQURT) were used. Since the analyses in this study do not focus on achievement changes or growth and only uses test scores as a reflection of students' performance on standardized tests, the data substitutions seem appropriate.

Guidance Counseling. This variable measures whether students received assistance from someone at their high school with particular aspects of the college application process. This measure is constructed from F2S57A, B, C, and D where students indicated whether they received (a) help filling out vocational/technical school or college applications, (b) help filling out financial aid forms, (c) assistance in writing essays for vocational/technical school or college applications, or (d) days off from school to visit vocational/technical schools or colleges? The responses for these four items are (1) yes, (2) no, and (3) school does not have. This scale composite variable of guidance counseling is the mean of Z-scores of students' responses to the four items above. Reliability analyses were performed to measure how closely these items are related to each other. The internal consistency (Cronbach's alpha) for this variable is 0.98.

Students' Educational Expectations. This variable measures participants' educational expectations as high school seniors based on F2S43 on the second follow-up student questionnaire, which asked: "As things stand now, how far in school do you think you will get?" Students' responses were recoded into the following categories: (1) not sure, (2) high school or less, (3) some college (less than four years, including two-year degrees), (4) finish college (bachelor's degree) and (5) graduate degree (master's or higher).

Parent and Peer Influence

Student Communication with Parents. This composite variable measures how often students communicated with their parents about school and school-related activities. It attempts to identify levels of parent involvement in their children's education, as well as general communication between students and their parents regarding their educational progress. The variable is constructed based on F2S99A, B, C, D, E, and F, in which students indicated how often they discussed the following with

either or both of their parents or guardians in the first semester or term of their senior year: (a) selecting courses or programs at school, (b) school activities or events of particular interest to them, (c) things they studied in class, (d) their grades, (e) plans and preparations for the American College Testing (ACT) or Scholastic Aptitude Test (SAT) tests, and (f) applying to college or other schools after high school. The responses for these six items are (1) never, (2) sometimes, and (3) often. The Cronbach's alpha (internal consistency) for this scale composite variable is 0.84.

Parent Involvement. This composite variable measures parents' involvement with their children's college application process. It is based on three items from the second follow-up parent survey in 1992. F2P63 asked parents to indicate how often they talked to their child in the past year about applying to a vocational/technical school, college, or university for education after high school. The responses for this item include (1) never, (2) rarely, (3) sometimes, and (4) often. F2P65B and C asked parents did they help their teenager make decisions about where to apply for further education after high school by talking to them about (a) particular schools and (b) about general qualities that they felt a school should have. The responses for these items are (1) yes and (2) no. The internal consistency (Cronbach's alpha) for this scale composite variable is 0.71.

Peer Influence. This scale variable is constructed from five items on the 1992 student survey and is the mean of Z-scores of students' responses to these five questions. It attempts to measure the influence of students' peers on their academic performance and perceptions about school. F2S68B, D, and H asked students: among close friends, how important is it to them that they (a) study, (b) get good grades, and (c) continue their education past high school. The responses to these three items were (1) not important, (2) some importance, and (3) very important. F2S69D and E asked students how many of their friends (a) planned to attend a two-year community college or technical school and (b) planned to attend a four-year college or university. Available responses to these questions were recorded into the following options: (1) none of them, (2) few or some of them, and (3) most or all of them. The Cronbach's alpha (internal consistency) for this scale variable is 0.61.

Financial Aid

Financial Aid. This composite variable measures receipt of financial aid and was constructed from GRANTS, LOANS, WORKSTDY, and OTH_FINA in the NELS data file. Responses to these items were (1) yes and (2) no. This variable is the mean of the Z-scores of participants' responses to whether they received the following types of financial aid while attending a postsecondary institution: grants/scholarships/fellowships, loans, college work study, or another form of financial aid. The internal consistency (Cronbach's alpha) is 0.95.